(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property **Organization**

International Bureau



(43) International Publication Date 19 May 2005 (19.05.2005)

PCT

(10) International Publication Number WO 2005/044710 A1

(51) International Patent Classification7: B66B 7/04, 1/34

(21) International Application Number:

PCT/US2003/031927

(22) International Filing Date: 8 October 2003 (08.10.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(71) Applicant (for all designated States except US): OTIS EL-EVATOR COMPANY [US/US]; Ten Farm Springs Road, Farmington, CT 06032 (US).

(72) Inventors; and

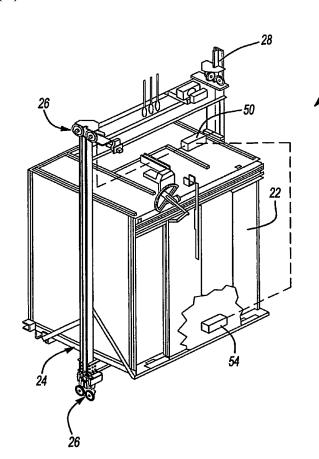
(75) Inventors/Applicants (for US only): KULAK, Richard [US/US]; 80 Aldbourne Drive, Bristol, CT 06010 (US).

TRACEY, Michael [US/US]; 637 Main Street, Cromwell, CT 06416 (US).

- (74) Agent: GASKEY, David J.; Carlson, Gaskey & Olds, 400 W. Maple Rd., Ste. 350, Birmingham, MI 48009 (US).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,

[Continued on next page]

(54) Title: ELEVATOR ROLLER GUIDE WITH VARIABLE STIFFNESS DAMPER



(57) Abstract: An elevator system roller guide device (26) includes a plurality of rollers (32) that roll along a guide rail (28). Dampers (40) that have a selectively variable stiffness dampen lateral movements between the rollers (32) and roller guide device base (30) as the elevator car assembly (20) moves through a hoistway. In one example, the dampers include a magneto-rheological fluid. A controller (50) selectively controls a magnetic field generated by an electromagnet (52) to selectively control the viscosity of the magneto-rheological fluid and the stiffness of the dampers (40).

WO 2005/044710 A1



ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

— of inventorship (Rule 4.17(iv)) for US only

Published:

- with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.